

# GREENWorks

## Ideas for a Cleaner Environment

A publication of the New Hampshire Department of Environmental Services, Concord, NH (603) 271-3710

September 2011

### **Dam it! It's drawdown time again**

Have you wanted to go boating on the lakes on one of the nice late fall days only to find that the water is too low in your area? Are you disappointed that even though it's an Indian summer, the water is too low to enjoy the lake like you did during the summer? There's a very good reason for that – it's called fall drawdown.

The drawdown of many lakes and ponds is carried out for numerous purposes including, but are not limited to: protection of the shoreline from the erosion effects of high water, reducing the affects of winter ice on the shoreline and shorefront structures, and providing water storage to mitigate flooding during the less used period between fall and summer. Drawdowns are also a good time to work on your shoreline, after checking with DES's Wetlands program (and maybe others) to see if you need a permit or special approval for said work.

Lake ice can reach a thickness of two feet or more and the force of such massive ice sheets is exerted in three ways. As the water freezes it expands and this expansion can exert tremendous force on the shoreline. If lake levels fluctuate when the ice is frozen onto an object the object will be moved with the ice. Also, as the near shore areas thaw in the spring the ice sheet begins to break apart and can be driven by the wind into the shore. Drawdowns are effective at transferring the location to undeveloped, normally submerged, lake bottoms and away from the natural shorelines and structures built there.

Drawdowns also allow for water levels in the lake to rise and fall in response to late season or early spring storms without causing flooding of shorefront property. This temporary refilling of the lake and storage of floodwaters can also help to reduce downstream flooding that may have resulted from short duration, high runoff events when the lake was full.

Some people worry that the drawdown can have negative impacts on fish and wildlife. The NHDES Dam Bureau has worked cooperatively with NH Fish & Game on reducing the impacts to fish and wildlife by scheduling the drawdowns around known hibernating, migratory or nesting periods.

Due to the aforementioned reasons, a drawdown should occur prior to any substantial freezing of the surface water. If there is a dry spring, it may take a bit longer to refill the lake to its summer level. However, lake level management knowledge and expertise gained over time are generally sufficient to control the levels of lakes and ponds to make everyone happy!

###